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MEMORIAL

OF THE

Board of Commissioners of Health

OF THE CITY OF NEW YORK,

ON THE SUBJECT OF

COMPULSORY VACCINATION

WITH A VIEW TO

EXTERMINATE THE SMALL-POX.

PUBLISHED BY ORDER OF THE BOARD.

NEW YORK:
WM. H. TRAFTON & CO., STATIONERS AND PRINTERS,
No. 85 Broad Street.
1862.

U784
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AT a meeting of the **Board of Commissioners of Health,** held at the *Mayor's Office*, in the City Hall, New York, February 27th, 1862,

PRESENT,

Hon. GEORGE OPDYKE, *Mayor*, Presiding,
ALEX. N. GUNN, M. D., *Health Officer*,
LEWIS A. SAYRE, M. D., *Resident Physician*,
JEDEDIAH MILLER, M. D., *Health Commissioner*.

Dr. SAYRE, *Resident Physician*, the Committee appointed at the last meeting to draft a Memorial and a Bill on the subject of COMPULSORY VACCINATION, read the documents prepared by him; whereupon it was on motion unanimously

"RESOLVED, That the Memorial and Bill just read be adopted, and "that His Honor the Mayor, as President of the Board, transmit them to "the State Legislature, with a request that that Honorable Body will take "favorable action thereupon."

"Further RESOLVED, That His Honor the Mayor be deputed to have "the Memorial printed in pamphlet form for general distribution, the num- "ber of copies to be left to his discretion."

Extract from the Minutes,

WM. H. ARMSTRONG,
Clerk.

38879

TO THE HON. GEO. OPDYKE,

MAYOR OF THE CITY OF NEW YORK,
PRESIDENT OF THE BOARD OF
Commissioners of Health.

Your Committee, who was appointed to draft a memorial, in favor of compulsory vaccination, and a law which would accomplish the same, begs leave respectfully to report.

That although unable to give the subject that attention which its importance demands, yet from the most careful study of the statistics, and of the opinions and experience of the most acknowledged authorities, he has come to the positive conclusion, *that Small-pox is capable of being entirely eradicated from any community, by a proper and persistent system of universal and repeated vaccination.*

From the year 1798 (when the immortal Jenner announced to the world his great discovery) to the present time, facts have been constantly accumulating for the elucidation of the most universally accepted truth ever demonstrated by the science of medicine, namely, "*that vaccination when properly performed, is a certain and perfect protection against Small-pox.*" *

The report of the Committee of the Medical Society of Philadelphia, made by Drs. Cox, Condie and Meigs, states that during the prevalence of a most malignant and fatal epidemic of Small-pox in 1827, but *one* well ascertained death from that disease, among 80,000 vaccinated, came to the knowledge of the committee.†

Drs. Bell and Mitchell report, that of 248 cases of variola and varioloid, treated at the Small-pox Hospital, 155 were unprotected by vaccination, of whom 85 died; 9 were innoculated, of whom 3 died, and 64 had been vaccinated, of whom but a single one died.‡

* Bell's report.

† N. A. Med. and Surg. Jour. Vol. ii, 1826.

‡ Bell and Stokes Practice.

In an epidemic which prevailed from 1825 to 1827, in Copenhagen, of those who had been vaccinated 428 were attacked, and in 26 of these all the symptoms of genuine variola were evinced, but only two of them died.*

In Holstein, from 1801 to 1822, 234,959 persons were subjected to vaccination, and during all this period, and for two years subsequent only *two* cases of Small-pox occurred. In the kingdom of Denmark, during the same period, only one individual among 447,605 vaccinated had been attacked by modified variola. Thus, showing that in a population of 682,564 people, with the exception of three cases, the disease was entirely exterminated for a period of 23 years.

The following statistics compiled from Dr. John Simon's report to the President of the General Board of Health of England, shows first, how many persons in each million of the population died annually of Small-pox, *before* the use of vaccination, and secondly, how many persons in each million of the population have annually died *since* the use of vaccination.

By reference to these tables it will be seen that previous to the use of vaccination there died annually of Small-pox, out of each million of population in Westphalia, during the years 1776–80, 2,643, and during 35 years, from 1816–50, after vaccination was adopted, the annual death rate from the same disease was only 114.

In Copenhagen, the deaths by Small-pox were 3,128, annually, for every million of people for many years, and after vaccination it was only 286. In Berlin, for twenty-four years previous to the general use of vaccination, the annual death-rate by Small-pox was 3,422, and for forty years subsequent it has been only 176. In Sweden, for twenty-eight years preceding the use of vaccination, out of every million of population, there died from Small-pox annually 2,050, and for forty years after the use of vaccination, the annual death-rate by Small-pox was only 158 to every million of the population.†

* Forry.

† Mr. J. Simon's Report, presented to both Houses of Parliament by command of Her Majesty. London. 1857.

These tables are arranged side by side, in tabular form for easy reference, and prove most conclusively the immense saving of human life by proper vaccination, and that if it be *efficiently* and *universally* performed, we can annihilate from our city this most dreadful scourge of the human race.

MORTALITY STATISTICS OF SMALL-POX.

APPROXIMATE AVERAGE ANNUAL DEATH-RATE BY SMALL-POX PER MILLION OF LIVING POPULATION.

Countries in which records have been taken.	Terms of years respecting which particulars are given.	Annual death per million by Small-pox *before* introduction of vaccination.		Terms of years respecting which particulars are given.	Annual death per million by Small-pox *after* introduction of vaccination.
Austria, Lower	1777—1806	2,484	and from	1807—1850	340
" Upper & Salzburg	1777—1806	1,421	"	1807—1850	501
Styria	1777—1806	1,052	"	1807—1850	446
Illyria	1777—1806	518	"	1807—1850	244
Trieste	1777—1806	14,046	"	1807—1850	182
Tyrol and Voralberge	1777—1803	911	"	1807—1850	170
Bohemia	1777—1806	2,174	"	1807—1850	215
Moravia	1777—1806	5,402	"	1806—1850	255
Silesia (Austria)	1777—1806	5,812	"	1807—1850	198
Gallicia	1777—1806	1,194	"	1807—1850	676
Bukswina	1777—1806	3,527	"	1807—1850	516
Prussia, East Province	1776—1780	3,321	"	1810—1850	556
" West Province	1776—1780	2,272	"	1810—1850	356
Posen	1780	1,911	"	1816—1850	743
Brandenburg	1776—1780	2,181	"	1810—1850	181
Westphalia	1776—1780	2,643	"	1816—1850	114
Rhenish Provinces	1776—1780	908	"	1816—1850	90
Berlin	1781—1805	3,422	"	1810—1850	876
Saxony (Prussia)	1776—1780	710	"	1816—1850	170
Pomerania	1780	1,774	"	1810—1850	130
Sweden	1774—1801	2,050	"	1810—1850	158
Copenhagen	1751—1800	3,128	"	1801—1850	286
		62,861			7,403
		7,403			
Lives saved		55,458			

We thus find that out of twenty-two millions of people there died annually from Small-pox, previous to vaccination, 62,861; and from the same number of people, there have died annually, since vaccination was adopted, only 7,403, thus saving annually the lives of 55,458 persons, besides the relief from physical suffering, which those who are afflicted with this terrible scourge must necessarily endure.

From all the evidence we have been enabled to obtain, we have reason to believe, in fact, we are almost positively certain, that had the vaccination been perfect and universal among these twenty-two millions, the other 7,403 could have been saved also. In proof of this view of the case, I append the following statistics, which have been furnished me by Dr. Whittelsey, the Resident Physician of Randall's Island.

It will be observed that in the Nursery Hospital, during the years of 1854–55–56, there were admitted 3,566 children, and yet no case of Small-pox occurred during this period, except the four cases that were brought there suffering from the disease at the time of admission, and it never spread to the other inmates in a single instance.

During these three years the Doctor attended personally to the vaccination of every child on admission, but in the subsequent five years, he states that it was done by subordinates, and in many instances overlooked entirely, and the result is clearly seen in the tables below, which show that 44 cases of Small-pox had occurred out of 6,867 children admitted during these five years.

But in the Refuge Hospital, which he retained under his own personal supervision, and in which he has persistently continued the plan of vaccination on admission, he has *entirely exterminated the disease for the last seven years.* These statistics speak volumes, and prove conclusively, that the disease can be exterminated by *universal* and *efficient vaccination* and re-vaccination, and I beg therefore to call your especial attention to them.

NURSERY HOSPITAL STATISTICS OF SMALL-POX.

Date.	No. Inmates.	No. admitted.	Whole number.	Cases Small-pox	Elsewhere contracted.	Remarks.
1851	1,354	2,087	3,441	4	....	
1852	1,419	1,794	3,213	1	1	
1853	1,311	1,729	3,040	7	....	
1854	1,305	1,385	2,690	3	3	1st year of vaccination on admission.
1855	1,156	1,222	2,378	1	1	
1856	1,062	959	2,021	....	....	No case contracted in the institution since commenced to vaccinate on arrival.
1857	879	1,276	2,155	4	....	
1858	1,407	1,169	2,576	13	8	
1859	1,320	1,148	2,468	11	3	
1860	1,142	1,397	2,539	6	3	
1861	1,153	1,877	3,030	10	5	
	13,508	16,043	29,551	60	24	36 whole number contracted in the institution.
		13,508				
		29,551				

Whole number of inmates during a period of 11 years.... 29,551
Whole number of cases of Small-pox during that period 60
Of which there were contracted and brought to the institution 24
Average yearly number of inmates..... 2,686
" " cases of Small-pox 5½
Contracted elsewhere..... 2½

HOUSE OF REFUGE STATISTICS BY DR. WHITTELSEY.

Since 1855 all children, deemed unprotected, have been vaccinated on their arrival.

There were in the Refuge January 1st, 1855... ..... 419 children.
There have been admitted up to January 1st, 1862 .....2,021 "

Total number.....2,440 children.

During this period of 7 years no cases of Small-pox or varioloid has occurred in the Refuge, notwithstanding there were children admitted, during the time, suffering with the disease, necessarily exposing the inmates to contagion.

Dr. J. G. Balfour,* Surgeon to the Royal Military Hospital, Chelsea, states that the Small-pox mortality of the British Navy has not reached a third, nor that of the British Army, a fourth of the London rate; and he says, "that in the experience of the Royal Military Asylum for forty-eight years (within which time 5,774 boys have been received for training) only four deaths by Small-pox occurred, *and these all in unvaccinated boys*, who were believed already to have suffered Small-pox before becoming inmates of the school." And the reviewer of these papers states, that "the combined weight of testimony from all sources of evidence is to show, *that in proportion* as vaccination *is general and efficient, so is the exclusion of Small-pox from the community, and the mortality greatly lessened.*"

Although from the above statistics it is abundantly proved that *vaccination will prevent Small-pox*, yet it is now generally admitted that its protecting influence IS NOT OF LIFE LONG DURATION; but that it diminishes in proportion to the lapse of time from the vaccination, until it has been several times repeated, or until the system has been so thoroughly infected with the vaccine poison, that it will then act as a permanent protection equally as well, as if the person had previously suffered from the Small-pox itself.

Dr. G. B. Wood † says: "It can not now be denied that a single vaccination does not afford the permanent security it was supposed to do. Probably nearly one-half of those vaccinated successfully are liable to more or less effect from the variolous contagion; though it is asserted, that when the operation is performed with *four or more insertions* instead of *one*, the proportion of the protection is much greater." Mr. Simon in his celebrated report says, that he was much struck with the fact, "that persons who had been vaccinated ten or fifteen years ago, and who during this interval had, perhaps, repeatedly resisted Small-pox, would at length, in a certain proportion of their number, yield to the infection."‡

This had most frequently happened during the times when Small-pox was severely epidemic among the unvaccinated,

* Brit. and For. Med.-Chir. Rev., Oct., 1857.

† Practice of Medicine, Vol. I, p. 410. ‡ Med.-Chirurg. Trans. xxxvi., 388.

and when large masses of persons, with vaccination of many years, were exposed to the test of a strong epidemic influence.

Under this ordeal, it became evident that, for some vaccinated persons, the insusceptibility conferred by cow-pox was not of life-long duration, and from a careful analysis of cases it was shown, that this lessened security of certain vaccinated persons bore at least *some* proportion to the number of years which in each case had elapsed since vaccination, but there were not materials to prove any uniform rate of increase, from year to year, and the increase, such as it was, apparently continued up to thirty years of age, after which period it seemed that the liability to contract Small-pox underwent a continuous decline.

We therefore see the absolute necessity to perform *re*-vaccination in order to insure permanent protection.

In proof of the practical value of re-vaccination, Mr. Simon states, on the authority of Professor Heim, that in Wirtemburg,* "during the five years, 1833–37, though Small-pox infection had been sixteen times imported into different regiments of the army, there had ensued among the 14,384 re-vaccinated soldiers only—in the person of one whose re-vaccination two years before had been followed by 'modified success'—a single instance of varioloid."

In Prussia, just as in Wirtemburg, the practice of re-vaccination grew out of the knowledge that Small-pox would ultimately attack a certain proportion of those who had been vaccinated only in infancy.

This knowledge, too, had been dearly purchased in the Prussian Army; for during the ten years preceding 1831, cases of post-vaccinal Small-pox were increasing in number and fatality; attacks were counted annually by many hundreds; and within the three years 1831–33, there had occurred no fewer than 312 deaths by Small-pox.

"For the last twenty years the Prussian Army has represented an almost entirely re-vaccinated population, and what has been the contrast? 104 annual deaths by Small-pox was the last experience of the former system; two annual

* Royal Ministry of War.

deaths by Small-pox has been the average for the re-vaccinated Army."

"From 1843 re-vaccination has been compulsory in the Bavarian Army; and from that date to the present time (1857) neither a single death by Small-pox, nor even a single case of unmodified Small-pox, has occurred in that population."

Many other statistics from Sweden, Denmark, Baden, and the British Army, could be cited equally striking as the above, proving conclusively the absolute necessity for *re-vaccination.* But as enough has been given to prove its efficacy, I will conclude my report by giving the average number of deaths that have occurred annually in the city of New York by Small-pox for the last ten years, showing the absolute necessity of some action being taken to arrest its frightful progress.

In the City of New York, for the last ten years, there has been an annual average death by Small-pox of more than 400 persons.

In view of this fact, and of the statistics I have presented above, we see the immense importance of some Legislative action for the better protection of our citizens from this most dreadful of all diseases.

And I should therefore recommend the enactment of such laws, as will properly enforce *efficient* and *universal* vaccination, and that it be *repeated* as often as every five years, until the age of twenty-one, and that each person shall be compelled to have a certificate testifying the same, and which shall be renewed every five years until twenty-one years of age.

The census being taken every five years will render this law easy of enforcement as the Marshal in taking the number of inmates in each house, can at the same time, inspect the date of their vaccine certificate, and the *penalty for neglect,* shall be, that if they are taken with the disease, and have not the proper certificate with its date, then they shall at once be removed to the Small-pox Hospital on Blackwell's Island, *nolens volens*, or such other County Hospital as may be designated for such purpose by the Supervisors of any County where the disease may occur.

That any Physician failing to report any case of Small-pox under his charge, within twenty-four hours, to the Resident Physician, in order that it be removed, (unless they have the proper certificate) shall be fined $100.

That any Hotel proprietor or keeper of a boarding or lodging house, or head of any family, failing to report any and every case of Small-pox occurring in his, her, or their house within twenty-four hours to the Resident Physician, shall be fined $50.

No child should be admitted into any public school without first presenting his certificate of vaccination.

All private schools, colleges, and benevolent institutions should be urged to make this a requisite necessary for admission.

In all Penal institutions and Public Hospitals the law can be enforced, and therefore made obligatory.

Every family on engaging a servant, every merchant on hiring a clerk, every captain when shipping a sailor, every mechanic on receiving an apprentice, every officer enlisting a recruit, should compel the applicant to exhibit his certificate of vaccination with its proper date, and so through all the different ramifications of society the attention of the community would be drawn to this important object, and its beneficial effects would soon be so apparent as to render no laws necessary for its continued enforcement.

The Physician at Quarantine should be compelled to vaccinate every person on arrival at this port, who has not the necessary certificate, or who does not present evidences of having had the disease. If these suggestions can be practically carried into effect, I confidently believe that in a few years at most, we will perfectly eradicate from our city this most disgusting and loathsome scourge.

All of which is respectfully submitted,

LEWIS A. SAYRE, M.D.,

Resident Physician.

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